

group and a complex compound group comprising at least two materials selected from a group of hafnium oxides; and a mixture group and a complex compound group comprising at least two materials selected from a group of aluminum oxides.--

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--112. (New) An illumination optical apparatus according to claim 101, wherein said multiple beams superposing member divides a wavefront of said beam from said light source.--

REMARKS

Claims 53-112 are pending. By this Amendment, claims 1-52 are canceled and claims 53-112 are added. No new matter has been added. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The Office Action rejects claims 1-36 under 35 U.S.C. §112, first paragraph and states that enablement is not provided for the values 10, 50 or 100. Claims 1-36 have been canceled. Thus, this rejection is moot.

Furthermore, support for the values 10, 50 and/or 100 is provided in the specification. In particular, the condition " $(d_1/2) (D_1/2) (\lambda \cdot f) \geq 3.05$ " or " $(d_2/2) (D_2/2) (\lambda \cdot f) \geq 3.05$ " is defined in independent claims 53, 56 and 59. The Office Action states that the disclosure claims "an open ended range for which there is no operational evidence of enablement at values toward infinity." Applicants respectfully disagree.

As described in the specification on pages 31-32, these conditions are the modifications of the conditions set forth in (e) and (f) which represent the width b of marginal areas on the entrance surface contributing to lowering the illuminance due to the diffraction limit being smaller than 1/10 of the size of d_1 of the entrance surface in the longer-side direction, or smaller than 1/10 of the size d_2 thereof in the shorter-side direction. In view of the explanation provided at page 30 of the specification, it is apparent that the above width "d" approaches zero endlessly. Thus, the value for the left part of the conditions (e) and (f)

approaches infinity. One of ordinary skill in the art would have understood that it is preferable that the values of the left parts of the conditions (e) and (f) become extremely large.

For at least these reasons, claims 52-112 satisfy the requirements of 35 U.S.C. §112, first paragraph.

The Office Action rejects claim 5 under 35 U.S.C. §112, second paragraph, and states that there is no description for the reference "d₁." Applicants respectfully disagree. At page 32, lines 21-23, "d₁" is defined as the size of the entrance surface in the longer-side direction. Thus, claim 5 satisfies the requirements of 35 U.S.C. §112, second paragraph.

Claims 53-112 satisfy the requirements of 35 U.S.C. §112, first and second paragraphs. Thus withdrawal of these rejections is respectfully requested.

None of the references cited in the Office Action (at page 4, first paragraph) teach or suggest all of the features recited in the independent claims.

Claims 53-112 have been added and also are patentable.

The Office Action states that a certified copy of the form Priority Documents based on the applications filed in Japan on December 15, 1999, May 26, 2000 and July 31, 2000 have not been received by the Patent Office. Applicants respectfully disagree. A Claim for Priority based on these applications was filed on November 2, 2000 with certified copies of the Priority Documents for this application. It is respectfully requested that the Examiner acknowledge receipt of these certified copies. For the convenience of the Examiner, a copy of the PTO stamp receipt indicating receipt of these certified copies is attached.

In view of foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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MAC:RZE/cfr

Attachments:

Petition for Extension of Time
Amendment Transmittal
November 2, 2000 U.S. PTO date stamp receipt

Date: May 2, 2003

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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PTO RECEIPT FOR FILING OF PAPERS

The following papers have been filed:

Appln. Trans. ltr & Ck. #113353 (\$1,686), 108 pp. spec., 52 clms, Abst., 23 shts of drwgs (Figs. 1-23), & CFP w/ cert. copy of JP-1999-355879 filed 12-15-99, JP-2000-157332 filed 05-26-00, & JP-2000-230349 filed 07-31-00

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Serial No.: New U.S. Application

Atty. File No.: 107759

Title (New Cases): OPTICAL INTEGRATOR, ILLUMINATION APPARATUS,
EXPOSURE APPARATUS

Sender's Initials: JAO:TJP/emb

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